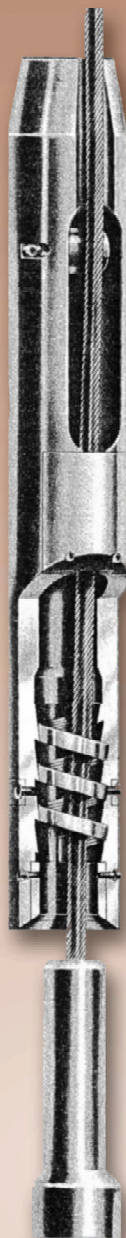


CABLE GUIDED & SIDE DOOR FISHING METHODS

Instruction Manual 8890



Cable Guided & Side Door Fishing Methods



NATIONAL OILWELL VARCO

One Company Unlimited Solutions

Cable Guided & Side Door Fishing Methods

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Cable Guided & Side Door Fishing Methods

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The designs and specifications for the tools described in this instruction manual were in effect at the time this manual was approved for printing. National Oilwell Varco, whose policy is one of continuous improvement, reserves the right to discontinue models at any time, or to change designs and specifications without notice or without incurring obligation.

Eighteenth Printing, September 2005

General Description

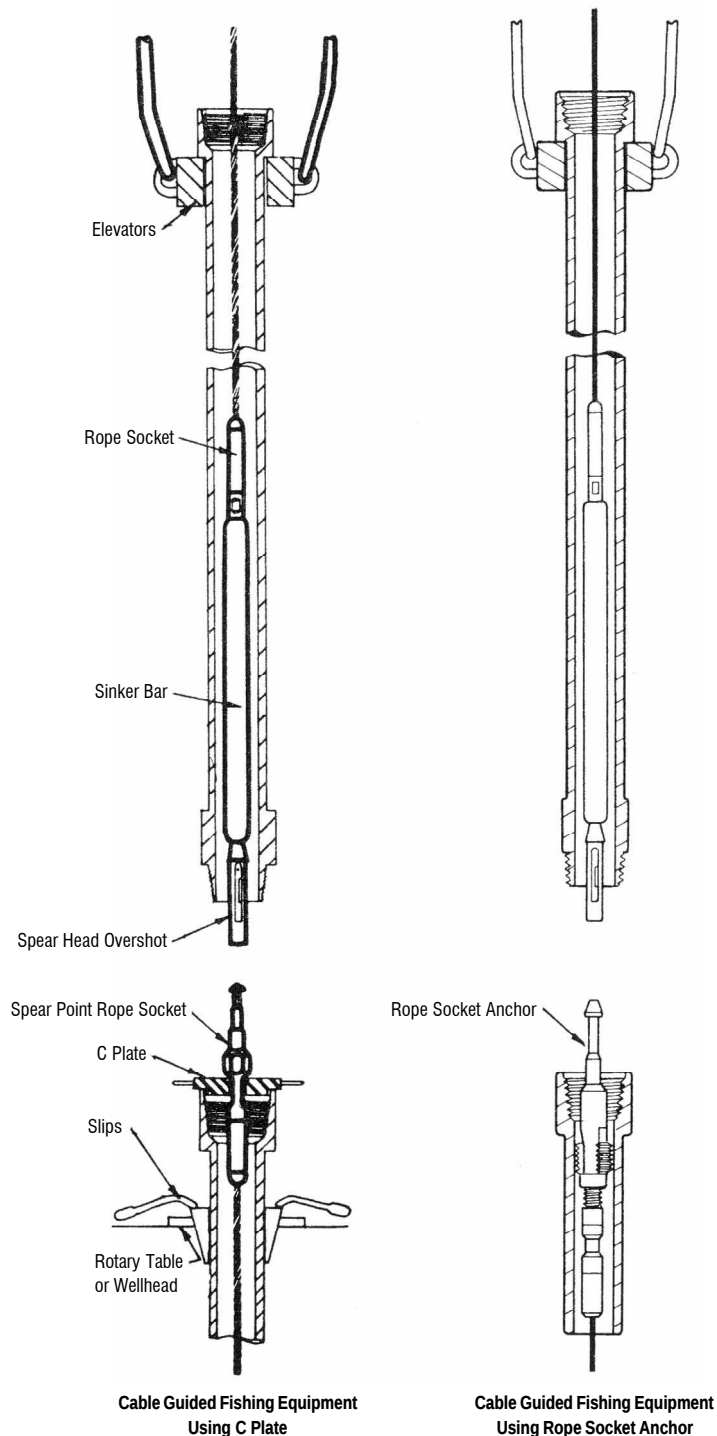
The Bowen Cable Guided Fishing Method employs specialty tools and accessories to insure positive engagement with stuck subsurface tools by the Overshot before the cable is released from the cable head. With the Bowen Cable Guided Fishing Method, valuable tools can be recovered, expensive multi-conductor cable can be salvaged and the bore hole can be cleared with a minimum of downtime.

The Side Door Fishing method employs the **Series 160 Side Door Overshot**, which is run on tubing or drill pipe, when fishing wire line in a cased hole. Use of these Overshots eliminates the necessity of cutting the line or cable.

Use

The Bowen Cable Guided Fishing Method is most frequently used in open-hole electrical well logging and related services conducted in uncased holes. Frequently, well conditions are such that tools used in these services become stuck, bridged over, or the line becomes key-seated in the walls of the well bore. The Cable Guided Fishing Method provides not only the procedure but also a completely custom tailored set of tools to recover such stuck tools and clear the well bore.

The Series 160 Side Door Overshot is recommended for use when fishing for conductor line or cable in a cased hole. They eliminate the necessity of cutting the line or cable, and provide greater pull capacity and control than do conventional wire line overshots.



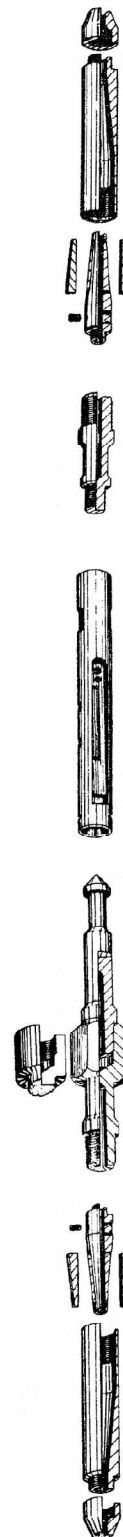
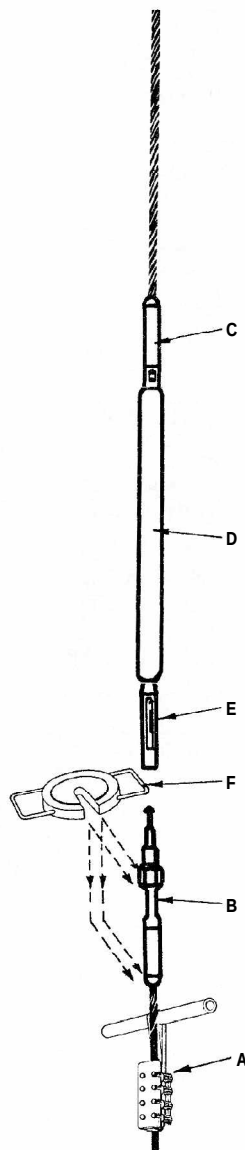
Construction

Construction of the individual component assemblies will be covered separately in the following pages. Construction of the overall fishing assembly for the Bowen Cable Guided Fishing Method consists of a Cable Hanger, Spear Head Rope Socket, Rope Socket, Sinker Bar, Spear head Overshot, and "C" Plate.

Assembly of the Equipment

The component assemblies are assembled together as follows:

1. Take a light strain on the cable to remove the slack.
2. Attach the Cable Hanger (A) to the cable at the well head, and lower the cable until the Cable Hanger rests on the Well Head or rotary table.
3. Cut the cable approximately four (4) feet above the Cable Hanger.
4. Make the Spear head Rope Socket (B) up to the 4 feet long end of the cable above the Cable Hanger (the lower half of the severed cable).
5. Make the second Rope Socket (C) up to the upper severed half of the cable end.
6. Connect the Sinker Bar (D) to the upper Rope Socket (C).
7. Connect the Spear head Overshot (E) to the Sinker Bar (D).
8. Engage the Spear Head Overshot (E) with the Spear Head Rope Socket (B) and exert a test strain of 1,000 pounds, or less strain than the pull-out strength of the cable head being used.
9. Disengage the Spear Head Overshot and break down both Rope Sockets, and re-tighten the set screws.



10. Engage the Spear Head Overshot with the Spear Head Rope Socket, and take another test strain of 1,000 pounds (or less than the cable head pull-out strength).
11. With the Spear Head Overshot engaged with the Spear Head Rope Socket, take sufficient strain to pick up the Cable Hanger, and remove the Cable Hanger.
12. Place the "C" Plate either under the hexagonal section of the Spear Head Rope Socket or under the Rope Socket around the cable. Allow the entire assembly to rest on the well head or rotary table.

This completes the assembly of the components. The fishing operations may now proceed.

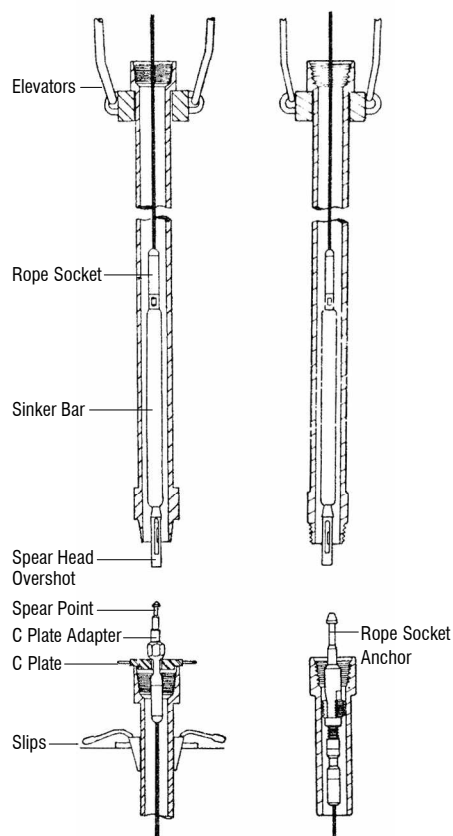
An alternate assembly employs the use of a Rope Socket Anchor in place of the "C" Plate and "C" Plate adaptor.

The Rope Socket Anchor is a simple rugged tool which has spring loaded slips. These slips set in the casing against any downward pull, but allow free movement in an upward direction. The Rope Socket Anchor is attached directly to the top of the Spear Head Rope Socket, in place of the "C" Plate Adaptor. Its use will be described under "Operation."

Operation

1. Disconnect the Spear Head Overshot and pull it up to the derrick man.
2. The derrick man will then thread the Spear Head Overshot and Sinker Bar through the first stand of pipe to which the Cable Head Overshot has been attached (see page 9 for Cable Head Overshot Instructions).
3. The Driller will then pick up the first stand and suspend it over the well head.
4. The Spear Head Overshot should then be connected to the Spear Head, a light strain taken on the cable and the "C" Plate removed.
5. The first stand of pipe is then run in and the slips are set.
6. After the "C" Plate is replaced and the assembly allowed to rest on the tool joint, the Spear Head Overshot is then disconnected and pulled back up to the derrick man.
7. The derrick man threads the Spear Head Overshot through the next stand of pipe, which in turn is picked up by the driller and suspended over the well head.
8. The Spear Head Overshot is connected to the Spear Head Rope Socket, the "C" Plate is removed and this stand is stabbed and made up to the first stand and run in.
9. The "C" Plate is replaced, the Spear Head Overshot again disconnected and pulled back up to the derrick man and this procedure is repeated until enough pipe has been run in to contact and free the fish.

10. After the fish has been contacted and pulled free, the Cable Hanger is again placed on the cable, the Rope Sockets are removed and the cable tied together with a square knot.
11. With the elevator latched around the "T" bar on the Hanger, a strain sufficient to pull the cable out of the fish is taken.
12. Remove the Cable Hanger and spool the free cable on to the service truck reel. The fishing string along with the fish may then be pulled from the hole in the conventional manner.



Operation using the Rope Socket Anchor is as follows:

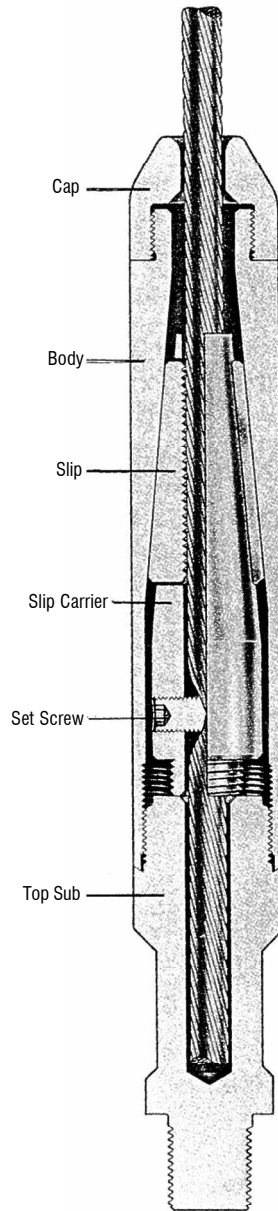
The Spear Head Overshot is disconnected and pulled up to the derrick man, who will thread the Overshot and Sinker Bar through the first stand of pipe to which the Overshot has been attached.

The driller picks up the first stand, suspending it over the well head. Connect the Spear Head Overshot to the Rope Socket Anchor; run in the first stand of pipe and set the slips. Set the Rope Socket Anchor in top of this stand of pipe. Disconnect the Spear Head Overshot, and pull it back up to the derrick man. The derrick man threads the spear Head Overshot through the next stand of pipe, which in turn is picked up by the driller and suspended over the well head. The Spear Head Overshot is again connected to the Rope Socket Anchor, and this stand is made up to the first stand and run in the hole. The Spear Head Overshot is again disconnected and pulled back up to the derrick man. This procedure is repeated until sufficient pipe has been run in to contact and engage the fish.

After the fish has been pulled, the Cable Hanger is again attached the cable, the Rope Sockets removed and the cable ends tied together with a square knot.

With the elevator latched around the Cable Hanger, a strain sufficient to pull the cable from the fish is taken.

The Cable Hanger may then be removed and the free cable spooled onto a drum. The fishing string, along with the free fish, may then be removed from the hole, in conventional manner.



Slip Type Rope Socket



**Extractor Tool
Shown in Position**

Bowen Slip Type Rope Sockets

Bowen Slip Type Rope Sockets are designed for use in the Cable Guided Fishing Method, particularly for the recovery of open-hole logging tools. Because of their construction, they provide for quick, easy installation or removal from the cable. The Slip Type Rope Socket consists of a Cap, a Body, a Slip Carrier, two Slips, a Set Screw, and a Sub. As strain is pulled on the cable, the Slips are squeezed in by the taper of the Body, forcing the teeth of the Slips to bite into the cable. Caps, Slip Carriers, and Slips are manufactured to close tolerance, and are code designated to insure proper usage, and to indicate recommended line sizes.

To Assemble on Cable

1. Thread the cable through the Cap and small I.D. of the tapered Body.
2. Make the Cap up to the Body.
3. Thread the small end of the Slip Carrier onto the cable, allowing 2" to 3" of cable to extend past the end.
4. **IMPORTANT!** The Set Screw should be made up until the cable is forced over **FLUSH** with the O.D. at the opening on the other side of the Slip Carrier.
5. Place the Slips in their Slots on the Slip Carrier and pull this portion of the tool down tightly into the Body.
6. Make the Sub up to the completed assembly.

NOTE: As mentioned in the "Assembly Procedure" on page 4 of this manual, the Rope Socket should be tested with a pull of 1,000 pounds, or something less than the pull-out strength of the Cable Head being used. Following this, it is highly recommended that the Rope Socket be dismantled and the Set Screw retightened, then reassembled, tested again and put into operation.

Disassembly

1. Remove the Sub and insert the shaft of the Extractor Tool making it up to the pin on the rear on the Slip Carrier.
2. Run the Extractor Tool Nut up to the Rope Socket Body and, using a wrench, continue to tighten the Nut until the Slip Carrier breaks free.
3. Back off the Screw and remove the Rope Socket parts from the cable.

Spear Head Overshot

The Spear Head Overshot is used to engage the Spear Head on the lower Rope Socket and provides a very strong, safe connection which may be quickly disconnected only upon the application of the following simple procedure.

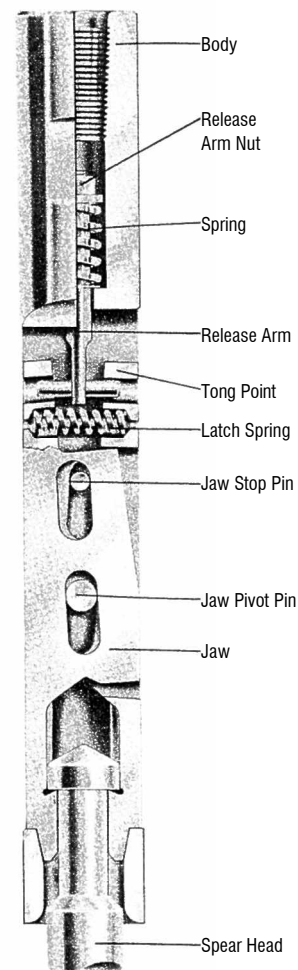
Operation

To dis-engage the Spear Head Overshot, all weight from the Spear Head must necessarily be relieved and Tongs applied to the Jaws near the top where two Tong "Dimples" will be found.

To engage the Overshot to the Spear Head, one needs only to drop or push the open end of the Overshot over the Spear Head.

To Assemble the Overshot

1. The Release Arm is inserted through the side of the Overshot Body and placed up inside the small hole between the middle and the top of the Body.
2. Next, one of the Jaws is slipped through the side of the Body and positioned on one side of the "Tee" on the Release Arm.
3. As the second Jaw is placed in the Body, the Latch Spring should be placed between the two Jaws, then the second Jaw positioned on the "Tee" of the Release Arm and held in by hand.

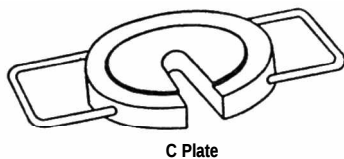


**Spear Head Overshot
with Spear Head Engaged**

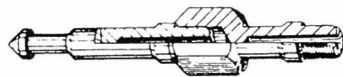
4. With this done and while holding the Jaws in against the Latch Spring, the Jaw Pin Stop and Jaw Pivot Pins are inserted and made up with a socket head wrench.
5. Raise the Jaws to their upper-most position and from the top, drop in the Release Arm Washer and then the Release Arm Spring.
6. Make up the Release Arm Nut to complete the assembly.

Disassembly

Merely reverse the above ASSEMBLY procedure.



C Plate



Spear Head Sub and Adapter

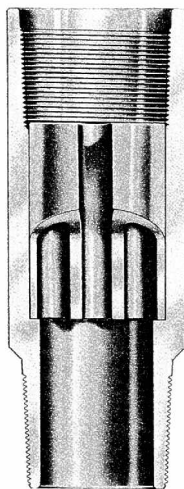
"C" Plates

Two standard types of "C" Plates are available, depending upon the type of Rope Socket components with which it is employed.

One "C" Plate fits under the Rope Socket and around the cable. It has a 29/32" wide slot. The other fits the "C" Plate Adaptor and has a 11/4" wide slot. Refer to the specifications and replacement parts list.

Special Circulating Subs and "C" Plates are available for use in wells that require circulation to be maintained when using the Cable Head Overshot.

The Circulation "C" Plate is inserted into the Circulating Sub around the cable. The "C" Plate seats below the tool joint in a recess provided for the purpose. The "C" Plate has ample circulation holes, as well as tapped holes in its face to allow insertion of a suitable bolt to aid in its removal from the Circulating Sub. Several of the more commonly used Circulating Subs and "C" Plates are listed in the specifications and replacement parts. Others are available on request to meet requirements.



Circulating Sub with C Plates

Bowen Circulating Subs with C Plates

Standard "C" Plate Slot Width	5/8
Body O.D.	6"
Type	Plain
Standard Connections	4/2" x H.
Complete Assembly	Part No. 17205
Weight	90

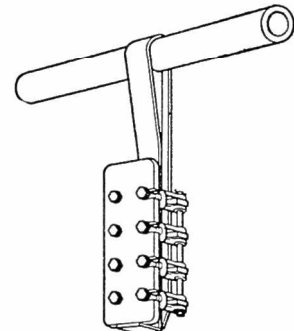
Replacement Parts

Sub Body	Part No. 17206
Weight	75
"C" Plate (Plug)	Part No. 17207
Weight	15

How to Order:

Specify:

- (1) Name and number of assembly or part.
- (2) Slot width of "C" Plate, if other than standard.
- (3) Connections and O.D.; if other than standard.



Cable Hanger

Cable Hanger

Cable Hangers are available to provide a safe, quick means of holding the cable during the cutting and the application of the Rope Sockets. The Cable Hanger is again utilized at the conclusion of the fishing job in order to pull the cable out of the released fish.

A grooved, hinged member, employed in conjunction with swinging clamp bolts, holds the cable while the "Tee" Handle on the Hanger offers a sturdy means of holding or supporting the entire assembly. Replaceable, grooved Liners are available, and line size must be specified to insure proper operation.

Rope Socket Anchor

The Rope Socket Anchor is designed specifically to anchor the upper end of a cable to the upper portion of the casing or drill pipe in which the cable is being fished.

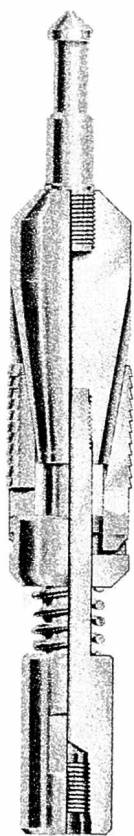
The Rope Socket Anchor is constructed so that the drill pipe may be run into the hole around the Rope Socket Anchor and cable while the Rope Socket Anchor remains near the top of the well being maintained in position by the SpearHead Overshot. The spring loaded slips allow the Rope Socket Anchor to slide upward in the drill pipe, but will set in the drill pipe when downward force is applied.

Construction is simple consisting of six parts: The Spear Head, Cone, Mandrel, Slips, Slip Carrier and Main Spring.

Disassembly is equally simple: Clamp the Cone in a suitable vise. Remove the Spear Head and Mandrel. The Main Spring may be slid off the Mandrel. The Slips and Slip Carrier will slide freely from the Cone in either direction.

Reassembly is accomplished by reversing this procedure. The parts should be thoroughly greased at assembly.

Caution: Make sure the tool is dressed with proper size slips for the drill pipe they are to be used in. See chart on page 15.



Rope Socket Anchor

Cable Head Overshot

Bowen Cable Head Overshots are recommended for use when fishing in open hole for items used on conductor line in Perforating, Logging, and similar operation. Within the size ranges provided (see List on page 16), these Overshots are designed to engage the various diameters and cable-head lengths necessary to fish most conductor line tools.

These Overshots are normally equipped with top connections which allow running one or more joints of casing having ample I.D. to swallow a cable electrode or bobbin above the fishing neck, to assure that the Overshot will travel far enough to engage the fish.

Cable Head Overshots are used with the special wire line tools described on page 4 to fish by the Cable Guided method. This method of fishing is essentially a process of cutting the conductor line above the wellhead and stringing the line through the fishing string to which the Cable Head Overshot is made up. With the line anchored at the wellhead, the two sections of line are fitted with attachments which facilitate threading the line through each stand of pipe as it is lowered into the hole.

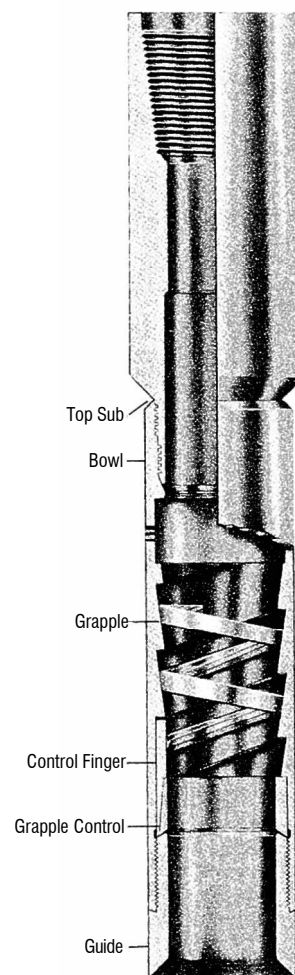
Cable Head Overshot Construction

The Overshot consists of a BOWL, a GRAPPLE, GRAPPLE CONTROL, and GUIDE. TOP SUBS are included as part of some assemblies, and are available as extras with others (see List, page 16).

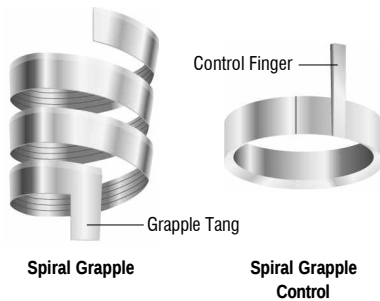
TOP SUB. A Top Sub can be provided to allow subbing the Overshot to casing of sufficient I.D. to swallow a cable-electrode or bobbin.

BOWL. The Bowl houses the Grapple and Grapple Control. It has an internal helix to accommodate the Grapple, and a shallow groove at the base of the helix to receive the Grapple Tang and Control Finger.

GRAPPLE. The Grapple is the part which actually takes hold of the fish. A Spiral-type Grapple is used for the larger sizes which the Overshot will catch, and a Basket-type Grapple is installed to adapt the Overshot to engage smaller sizes, beginning at 1/2" or 5/8" below the largest catch size of Spiral Grapples. (Exact ranges shown in Overshot Parts List, page 16).

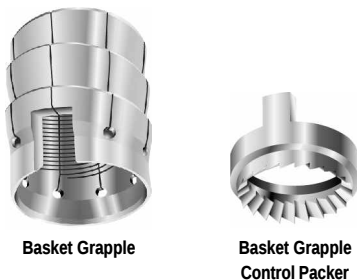


Cable Head Overshot



A SPIRAL GRAPPLE is an expansible, tapered left-hand helix whose external surface conforms to the interior of the Bowl, and whose interior surface is wickered to enable the Grapple to bite into and grip the fish.

Specially designed Spiral Grapples are available which are ideal to catch a rubber-covered bell housing or logging tool case. These have a single deep-cut wicker which penetrates the rubber wall and takes a positive grip on the fish.



A BASKET GRAPPLE is an expansible slotted cylinder with left-hand helical exterior which fits the interior helix of the Bowl. Like the Spiral type, it is equipped with a wickered interior surface for gripping the fish. An integral Stop can be provided if desired, to position the fish in the Basket Grapple.

GRAPPLE CONTROL. The Grapple Control's function is to anchor the Grapple in place in the Bowl. The Control is, like the Grapple, either a Spiral or Basket type. It fits in the Bowl at the base of the Grapple. A Control Finger fits next to the Tang of the Spiral Grapple, or in a slot in the Basket Grapple, and in a Bowl recess.

GUIDE. The Guide directs the fish into the Bowl. Most Guides for Cable Head Overshots are short and plain, as shown in the illustration.

Cable Head Overshot Assembly, Operation, and Maintenance

To assemble the CABLE HEAD OVERSHOT, proceed as follows:

Assemble the GRAPPLE in the Bowl. If a SPIRAL GRAPPLE is used, grasp the Grapple by the Control end which is tanged, and screw it into the Bowl. LEFT HAND rotation must be used, as the Grapple is made on a left-hand lead spiral. Insert the Grapple deep enough into the Bowl to allow the tang to come to rest in the slot provided for the purpose near its lower end.

Follow the Grapple with the GRAPPLE CONTROL, inserted into the Bowl with its finger up (toward the Grapple).

Allow the Control Finger to lay alongside the Grapple tang at the left side, when viewed from the lower end. This Control Finger functions as a special key. Seat the upper face of the Grapple Control against the lower spiral in the Bowl.

If a BASKET GRAPPLE is used, assemble it by using left-hand rotation. Allow it to come to rest with the control slot in its lower end aligned with the slot in the lowest spiral of the Bowl.

Follow the Basket Grapple with the Basket Grapple Control. Its finger will fit into the slot in the Bowl and also the slot in the Basket Grapple, keying the two together.

Insert the GUIDE and make it up tight.

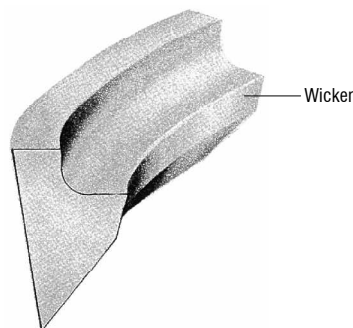
Make up the TOP SUB, if used. Some Cable Head Overshots use Top Subs, and others do not.

Operation Engagement of Fish

Make up the assembled Overshot on the fishing string and run it in. (Method of stringing line through Overshot and fishing string described on page 4). When the Overshot nears the fish, rotate slowly and simultaneously gradually lower the tool over the fish. With the wickered Grapple engaging the fish, the lowering and right-hand rotation of the string moves the Grapple upward within the tapered helix of the Bowl, thus allowing the Grapple to expand and permit easy entry of the fish.

Pulling the Fish

To pull the fish, take all torque out of the string and exert an upward strain on the pipe. The drag of fish on Grapple wickers pulls the Grapple downward in the tapered Bowl helix. This causes the Grapple to contract, thus biting into the fish and gripping it tightly, enabling the fish to be pulled as the upward strain is maintained.



Cross-sectional view of special single-wickered Grapple used in some Cable Head Overshots to penetrate rubber wall and engage steel case.

Release from Fish

To release from the fish, bump down sharply to break the freeze; then, while slowly rotating to the right, gradually raise the string (approximately 11/2" for each full turn of the Overshot) until tool is clear of fish. The same procedure is followed whether release is effected in the hole or from a recovered fish.

Caution: The Overshot should be left intact until disengagement from fish is completed.

The tool should never be turned to the left when going over or coming off a fish.

Maintenance

After use the Overshot should be disassembled and inspected for wear or damage. Badly worn or damaged parts should be replaced with new ones. All parts should be washed with solvent, and all interior parts, including the inside surfaces of Bowl, Top Sub, and Guide, should be greased with heavy grease. The tool should then be reassembled and the exterior greased or painted.

If the Overshot is not used for a long period of time, it should be disassembled and cleaned again before using. Re-grease outside of Grapple and inside of Bowl with heavy grease and re-assemble.

Thread dope should be used on threads when assembling tool. In making up and breaking connections, place tongs about 1" to 2" from connection, never in middle of Bowl.

Fishing by Side Door Overshot Method

Bowen Series 160 Side Door Overshots are recommended for use when fishing for conductor line or cable tools in a cased hole.

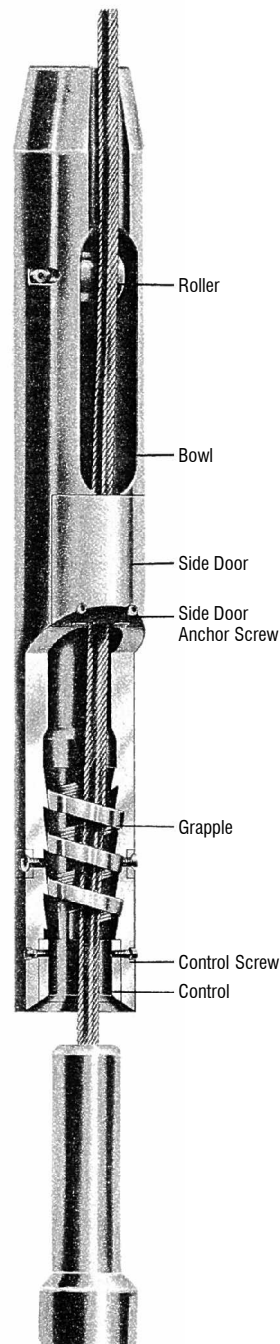
These Overshots are run in on tubing or drill pipe. A side door in the Bowl is removed to allow the line to be fed into the tool, after which the door is put back into position as part of the Bowl.

Thus these tools eliminate the necessity of cutting the line or cable; they eliminate the fouling of lines which sometimes takes place when two lines are in the hole; and they provide more positive control than would be possible in fishing with a conventional wireline overshot.

Construction

Principal parts are a Bowl, Grapple, and Grapple Control. The Bowl, designed to provide an easy annular approach over the cable to the fish, is long and grooved and equipped with a Roller on which the cable rides. The side door itself is a removable slide forming part of the wall of the Bowl. Removal of the side door permits the cable to be passed through the wall of the Bowl, allowing the Overshot to be made up on the line. When in place the side door is held in position by four countersunk set screws and a Shear Ring.

The Grapple, the part which actually engages the fish, is a left-hand helix which fits the interior helix of the Bowl. It takes hold of the fish by means of wickers which cover its interior surface.



Series 160 Side Door Overshot

A Spiral-type Grapple is used for the larger sizes caught by a given Overshot, and a Basket-type Grapple is used to adapt the tool to smaller sizes. An enlarged slot on the Basket Grapple permits it to be made up on the line.

The Grapple Control is likewise either a Spiral or Basket type. This part anchors the Grapple in the Bowl. It fits next to the Grapple with the Control Finger against the Spiral Grapple Tang, or in a slot in the Basket Grapple, and in a Bowl recess. The Control is held in place by set screws.

Assembly and Operation

With the side door and all interior parts removed, the Bowl is placed on the cable and the side door fastened into place. The Grapple is slipped onto the cable and screwed into place in the Bowl, followed by the Control, which is fastened by the Control Screws.

The Overshot is run in, and as it nears the fish the string is rotated slowly to the right as the Overshot is gradually lowered over the fish. With the wickered Grapple engaging the fish, the lowering and right-hand rotation of the string moves the Grapple upward within the tapered helix of the Bowl, thus allowing the Grapple to expand and permit easy entry of the fish.

To pull the fish, take all torque out of the string and exert an upward strain on the pipe. The drag of fish on Grapple wickers pulls the Grapple downward in the tapered Bowl helix. This causes the Grapple to contract and bite into the fish, gripping it tightly. An upward strain is then maintained to pull the fish.

To release from a fish in the hole, bump down to break the freeze, then gradually raise the string while rotating slowly to

the right. To release from a recovered fish, follow the same procedure while holding the fish below the Overshot.

Maintenance

After use, the Overshot should be disassembled and inspected and new parts installed in place of any badly worn ones. All parts should be washed with solvent, and the interior parts, including the inside surface of the Bowl, should be greased. The tool should be re-assembled and the exterior greased or painted.

If the Overshot is not used for a considerable period, it should be disassembled and cleaned again before using. The outside of the Grapple and the inside of the Bowl should then be re-greased and the tool re-assembled.

Bowen Cable Guide Fishing Assembly

Nominal Assembly Size		1-11/16	1-11/16	1-3/4	2-1/8
Rope Socket Connection		3/4 S.R.	3/4 S.R.	3/4 S.R.	7/8 S.R.
Sinker Bar Connection		3/4 S.R. Pin	3/4 S.R. Pin	3/4 S.R. Pin	7/8 S.R. Pin
Overshot Connection		3/4 S.R. Box	3/4 S.R. Box	3/4 S.R. Box	7/8 S.R. Box
Complete Assembly	Part No.	14687	18930	18931	18932
	Weight	80	189	190	145

Replacement Parts

Sub-Assembly Rope Socket	Part No.	15680	15680	13115	12970
Consists of	Weight	7	7	7	11
Sub	Part No.	15681	15681	13116	12971
	Weight	3	3	3	4
Body	Part No.	15682	15682	13117	12972
	Weight	1-1/2	1-1/2	1-1/2	4-1/4
Slip Carrier	Part No.	13118	13118	13118	12973
	Weight	1	1	1	1
Slip (2 Required)	Part No.	13119	13119	13119	12974
	Weight	1/2	1/2	1/2	1/2
Cap	Part No.	15683	15683	13120	12975
	Weight	1	1	1	1
Set Screw	Part No.	13121	13121	13121	13121
	Weight	—	—	—	—
Carrier Extractor Tool	Part No.	15170	15170	15170	15175
	Weight	1	1	1	1
Sinker Bar (1-11/16 O.D. X 6* Lg.)	Part No.	12722	12722	—	—
	Weight	—	47	—	—
Sinker Bar (1-3/4 O.D. X 6* Lg.)	Part No.	—	—	12727	—
	Weight	—	—	49	—
Sinker Bar (2-1/8 O.D. X 4* Lg.)	Part No.	12729	12729	12729	12728
	Weight	48	48	48	48
Sub-assembly Spear Head Overshot	Part No.	11810	11810	11810	11825
	Weight	10	10	10	11
Body	Part No.	11811	11811	11811	11826
	Weight	8	8	8	8-1/2
Jaw (Set Of 2)	Part No.	11812	11812	11812	11812
	Weight	1-1/4	1-1/4	1-1/4	1-1/4
Pivot Pin	Part No.	11813	11813	11813	11827
	Weight	—	—	—	—
Jaw Stop Pin	Part No.	11814	11814	11814	11828
	Weight	—	—	—	—
Latch Spring	Part No.	11815	11815	11815	11815
	Weight	—	—	—	—
Release Spring	Part No.	11816	11816	11816	11816
	Weight	—	—	—	—
Spring Washer	Part No.	11817	11817	11817	11817
	Weight	—	—	—	—

How To Order:

- Specify:**
- (1) Name & Number of Assembly & Part.
 - (2) Line Size (Diameter).
 - (3) Type C Plate Desired.

Recommended Spare Parts:

- (1) 3 Sets Slips for each Rope Socket.

Bowen Cable Guide Fishing Assembly

Nominal Assembly Size	1-11/16	1-11/16	1-3/4	2-1/8
Rope Socket Connection	3/4 S.R.	3/4 S.R.	3/4 S.R.	7/8 S.R.
Sinker Bar Connection	3/4 S.R. Pin	3/4 S.R. Pin	3/4 S.R. Pin	7/8 S.R. Pin
Overshot Connection	3/4 S.R. Box	3/4 S.R. Box	3/4 S.R. Box	7/8 S.R. Box

Replacement Parts

Release Arm	Part No.	11819	11819	11819	11819
	Weight	1/4	1/4	1/4	1/4
Release Arm Nut	Part No.	11820	11820	11820	11820
	Weight	1/8	1/8	1/8	1/8
Oversize Guide 2-1/8" O.D.	Part No.	11823	11823	11823	—
	Weight	1-1/2	1-1/2	1-1/2	—
Oversize Guide 2-3/4" O.D.	Part No.	11823	11823	11823	—
	Weight	2	2	2	—
Guide Pins (2 Required)	Part No.	11829	11829	11829	—
	Weight	—	—	—	—
Release Tongs	Part No.	11882	11882	11882	11882
	Weight	3	3	3	3
Sub-Assembly Spear Head Rope Socket Consists of	Part No.	15685	15685	14663	14870
	Weight	9	9	9	13
Spear Head Sub	Part No.	15686	15686	14669	14871
	Weight	1	1	1	1
Body	Part No.	15682	15682	13117	12972
	Weight	1-1/2	1-1/2	1-1/2	4-1/4
Slip Carrier	Part No.	13118	13118	13118	12973
	Weight	1	1	1	1
Slips (2 Req'd.)	Part No.	13119	13119	13119	12974
	Weight	1/2	1/2	1/2	1/2
Cap	Part No.	15683	15683	13120	12975
	Weight	1	1	1	1
Set Screw	Part No.	13121	13121	13121	13121
	Weight	—	—	—	—
C-Washer Adapter (Hex)	Part No.	15689	15689	14667	31134
	Weight	1	1	1	—
C-Washer Adapter (Plain)	Part No.	15690	15690	14668	14872
	Weight	1	1	1	1
Cable Hanger (W/Liners)	Part No.	—	10380	10380	10380
	Weight	—	46	46	46
Replacement Cable Hanger Liners (Specify Line Size)	Part No.	—	29272	29272	29272
	Weight	—	—	—	—
C-Plate 29/32 Fits Under Rope Socket	Part No.	—	10382	10382	10382
	Weight	—	7	7	7
C-Plate 1-1/4 Fits Adapter	Part No.	—	10384	10384	10384
	Weight	—	7	7*	7

How To Order:

Specify:

- (1) Name & Number of Assembly & Part.
- (2) Line Size (Diameter).
- (3) Type C Plate Desired.

Recommended Spare Parts:

- (1) 3 Sets Slips for each Rope Socket.

Bowen Cable Guide Fishing Assembly

Optional Sub Assembly - Rope Socket Anchor

To Set In		2-7/8 API-I.F.	3-1/2 API-I.F.	4-1/2 API- F.H.
O.D.		1-13/16	2-1/4	2-5/8
Spear Head O.D.		1-1/16	1-1/16	1-1/16
Standard Lower Connection		3/4 S.R. Box	3/4 S.R. Box	3/4 S.R. Box
Complete Assembly	Part No.	14060	13980	12400
	Weight	9-3/4	12-1/4	17-3/4

Replacement Parts

Spear Head	Part No.	12401	12401	12401
	Weight	1-1/4	1-1/4	1-1/4
Cone	Part No.	14061	13982	12402
	Weight	3-3/4	5-1/2	9
Mandrel	Part No.	14062	13983	12403
	Weight	3	3-1/4	5
Slip (3 Req'd.)	Part No.	*14063	†13984	8586
	Weight	1/4	1/2	1/2
Slip Carrier	Part No.	14064	13985	12405
	Weight	1	1-1/4	1-1/2
Main Spring	Part No.	14065	13986	12406
	Weight	1/2	1/2	1/2

Optional - Extra

Slip 4-1/2 X-Hole	Part No.	—	—	12407
	Weight	—	—	1/2
Slip 4-1/2 I.F.	Part No.	—	—	12408
	Weight	—	—	1/2

* Also Fits 2-3/8 Tubing as is.

†Also Fits 3-1/2 API F.H. and 2-7/8 Tubing as is.

Line Size Code For Carrier, Slips & Caps

Part	Line Size	15680	13115	12970
Slip Carrier	3/16 -	13118-5	13118-5	—
	7/32 - 5/16	13118-4	13118-4	—
	11/32 - 7/16	13118-3	13118-3	12973-3
	15/32 - 9/16	13118-2	13118-2	12973-2
	19/32 - 3/4	—	—	12973-1
Slips	3/16 -	13119-5	13119-5	—
	7/32 - 5/16	13119-4	13119-4	—
	11/32 - 7/16	13119-3	13119-3	12974-3
	15/32 - 9/16	13119-2	13119-2	12974-2
	19/32 - 3/4	—	—	12974-1
Caps	3/16 -	15683-5	13120-5	—
	7/32 - 5/16	15683-4	13120-4	—
	11/32 - 7/16	15683-3	13120-3	12975-3
	15/32 - 9/16	15683-2	13120-2	12975-2
	19/32 - 3/4	—	—	12975-1

Cable Head Overshots

Overshot Series	101	101	105	101	101	101	100
Maximum Catch Spiral	2-3/8	2-3/8	2-3/8	3-3/8	3-3/4	3-7/8	3-7/8
Maximum Catch Basket	1-7/8	1-7/8	1-7/8	2-3/4	3-1/8	3-1/4	3-1/4
Overshot O.D.	3-1/8	3-1/2	3-1/2	4-3/8	5	5-1/4	5-1/4
Type Bowl Connection Box	2-3/8 EUE 8 Thd.	2-3/8 EUE 8 Thd.	2-3/8 EUE 8 Thd.	3 Tub	4 Hydril Flush	4 Hydril Flush	4-1/2 Hydril Flush
Complete Assembly	Part No. 9750 Weight 24-1/2	9940 27	9357 35	4431 29	9980 87	11490 147	11805 121

Replacement Parts

Bowl	Part No.	9751	9941	9358	4432	9981	11491	11807
	Weight	14	24	27	23	44	45	30
Grapple	Part No.	9307	9952	1448*	4195	814	859*	11808*
	Weight	2	1/2	1	1	4-1/4	2-1/2	1
Control	Part No.	9308	9953	1449	4196	815	875	11809
	Weight	1/2	1/2	1/2	1-1/2	1-1/2	3	2
Guide	Part No.	9312	9942	4074	4434	816	11492	11804
	Weight	5-1/2	2-1/2	3	3-1/2	37	12	14

Basket Parts

Basket Grapple	Part No.	9307	9952	1448	4195	814	859	11808
	Weight	1-1/2	1-1/2	1/2	2	2	2	12
Basket Control	Part No.	9308	9953	1449	4196	815	875	11809
	Weight	1	1	1/4	1-1/2	1-1/2	1-1/2	8
Thread Protector Internal	Part No.	—	—	9359	—	—	—	—
	Weight	—	—	—	—	—	—	—
(Inc. In Assembly Price)								
Thread Protector External	Part No.	—	—	9360	—	—	—	—
	Weight	—	—	—	—	—	—	—
(Inc. In Assembly Price)								

Accessories

Top Sub	Part No.	9768	—	9361	4433	9982	9982	11806
(Add To Assembly Price)	Weight	—	—	85	85	85	85	75

How To Order:

- Specify:
- (1) Name & Number of Assembly or Part.
 - (2) Top Connection.
 - (3) Size & Type of Fish to be Caught.
 - (4) Top Sub Connections, if desired.

Recommended Spare Parts:

- (1) Spiral - 2 grapples, 1 control each size.
- (2) Basket - 2 grapples, 1 control each size.

Special Notes:

- (1) * Special single wicker grapples to penetrate rubber and catch metal case, if specified.
- (2) Assembly 9357 has a 2-3/8 EUE Box and a 3-1/2 D.P. Pin connection on Bowl. The 9489 Top Sub has a 4-1/2 F.H. Box Up with a 3-1/2 D.P. Box and a 5 X-Line Pin Down.

Bowen Overshots - Series 160

Maximum Catch (Spiral)	2	2	2 ³ / ₈	2 ³ / ₈	2 ³ / ₈	
Maximum Catch (Basket)	1 ¹ / ₂	1 ¹ / ₂	1 ⁷ / ₈	1 ⁷ / ₈	1 ⁷ / ₈	
Overshot O.D.	3 ¹ / ₈	3 ³ / ₄	4	4 ¹ / ₂	4 ¹ / ₂	
Top Connection	2 ³ / ₈ EUE Box	2 ⁷ / ₈ API Reg.	2 ³ / ₈ API Reg. Box	ACME STR 6 Thd.	2 ³ / ₈ API Reg. Box	
Complete Assembly	Part No.	15955	C-11145	9560	6400	9985
	Weight	60	65	70	195	105

Replacement Parts

Bowl	Part No.	15957*	C-11146*	9562	6401	9986*
	Weight	58	60	62	98	98
Roller	Part No.	15961	A-5440	9566	6456	6456
	Weight	1 ¹ / ₄	1 ¹ / ₄	1 ¹ / ₄	1 ¹ / ₄	1 ¹ / ₄
Roller Pin	Part No.	15962	A-11296	9567	6457	6457
	Weight	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈
Roller Pin Screw	Part No.	9558	—	9568	9568	9568
	Weight	—	—	—	—	—
Shear Ring	Part No.	15958	A-14221	9564	6422	6422
	Weight	1 ¹ / ₄	1 ¹ / ₄	3 ³ / ₈	3 ³ / ₈	3 ³ / ₈
Shear Ring Screw (2 Req'd.)	Part No.	15964	23124	8593	25220	25220
	Weight	—	—	—	—	—
Grapple	Part No.	1811	B-11147	1448	1448	1448
	Weight	1 ¹ / ₂	1 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3 ³ / ₄
Control	Part No.	15965	A-11148	6403	6403	6403
	Weight	1 ³ / ₄	1 ³ / ₄	2	2	2
Control Screw (2 Req'd.)	Part No.	15966	9933	9558	10285	10285
	Weight	—	—	—	—	—
Top Sub	Part No.	—	—	—	7243	—
	Weight	—	—	—	30	—
Side Door Screw (4 Req'd.)	Part No.	8181	23507	9559	9568	9568
	Weight	—	—	—	—	—

Basket Parts

Basket Grapple	Part No.	15956	B-11147	6402	6402	6402
	Weight	1 ¹ / ₂	1 ¹ / ₂	2 ³ / ₄	2 ³ / ₄	2 ³ / ₄
	Price	1 ¹ / ₂	1 ¹ / ₂	2 ³ / ₄	2 ³ / ₄	2 ³ / ₄
Basket Control	Part No.	15965-B	A-11148	6403-B	6403-B	6403-B
	Weight	1	1	3	3	3

Optional Equipment

Oversize Guide	Part No.	15959	—	9563	7217	7217
	Weight	56	—	63	60	60
Guide Key Screw (2 Req'd.)	Part No.	8181	—	9551	6461	6461
	Weight	—	—	—	—	—
Guide Anchor Segment (4 Req'd.)	Part No.	15960	—	9552	6462	6462
	Weight	2	—	2 ¹ / ₄	2 ¹ / ₂	2 ¹ / ₂
Guide Anchor Segment Screw	Part No.	13847	—	9553	9568	9568
	Weight	—	—	—	—	—

*Extra Wide Slot For Passage Of Cable Head.

Bowen Overshots - Series 160

Maximum Catch (Spiral)		2 ⁹ / ₄	3 ¹ / ₈	3 ²¹ / ₃₂
Maximum Catch (Basket)		2 ¹ / ₄	2 ⁵ / ₈	3 ¹ / ₈
Overshot O.d.		4 ¹ / ₂	4 ¹¹ / ₁₆	5 ¹ / ₂
Top Connection		2 ⁷ / ₈ API	2 ⁷ / ₈ API	2 ⁷ / ₈ API
		Reg. Box	Reg. Box	Reg. Box
Complete Assembly	Part No.	9900	9965	9920
	Weight	167	139	177

Replacement Parts

Bowl	Part No.	9901	9966*	9921
	Weight	154	128	168
Roller	Part No.	9902	9967	9922
	Weight	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂
Roller Pin	Part No.	9903	9968	9923
	Weight	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈
Roller Pin Screw	Part No.	9568	9568	9924
	Weight	—	—	—
Shear Ring	Part No.	9905	9970	9925
	Weight	3 ³ / ₈	3 ³ / ₈	3 ³ / ₈
Shear Ring Screw (2 Req'd.)	Part No.	9906	9906	9906
	Weight	—	—	—
Grapple	Part No.	9907	1741	6662
	Weight	1 ¹ / ₄	1 ¹ / ₄	1 ¹ / ₂
Control	Part No.	9908	9973	9927
	Weight	2	2	2 ¹ / ₂
Control Screw (2 Req'd.)	Part No.	9909	9933	9928
	Weight	—	—	—
Top Sub	Part No.	—	—	—
	Weight	—	—	—
Side Door Screw (4 Req'd.)	Part No.	9558	9558	9558
	Weight	—	—	—

Basket Parts

Basket Grapple	Part No.	9907	9972	9934
	Weight	4 ¹ / ₂	3 ¹ / ₂	4
Basket Control	Part No.	9908-b	9973-b	9927-b
	Weight	3	3 ¹ / ₂	4

Optional Parts

Oversize Guide	Part No.	9911	9976	9930
	Weight	6	7	7 ¹ / ₂
Guide Key Screw (2 Req'd.)	Part No.	6461	6461	6461
	Weight	—	—	—
Guide Anchor Segment (4 Req'd.)	Part No.	9913	9978	9932
	Weight	2	2	3
Guide Anchor Segment Screw	Part No.	9933	9933	9933
	Weight	—	—	—

NOTE: No. 6400 Side Door Overshot has a straight thread top connection in Bowl and requires special Top Subs.

Recommended Spares : 2 Grapples for each size, Basket or Spiral.
2 Grapple Controls for each size.

*Extra wide slot for passage of Cable Head.

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* Denotes Manufacturing and Engineering facilities

Downhole Solutions

Drilling Solutions

Engineering and Project Management Solutions

Lifting and Handling Solutions

Production Solutions

Supply Chain Solutions

Tubular and Corrosion Control Solutions

Well Service and Completion Solutions